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THE FACTUAL.[1]

VARIOUS words are still used to denote that content of which we are immediately aware as opposed to what we know either through assumption or through inference. Writers call it variously the 'immediately known,' 'the content of simple apprehension,' 'the given,' 'sense impressions,' 'psychical fact' or 'psychical matter of fact,' 'immediate experience,' 'data of experience,' 'pure experience,' or, simply, 'experience.'

Many of these terms imply a solution of the problem at issue between realism and idealism, and should therefore seem a begging of the question to any metaphysican who regards the notion for which they stand as logically precedent to that problem. Still more objectionable must their idealistic bias seem to a realist of the present-day type, who wishes to emphasize that that of which we are immediately aware is neither mental nor non-mental, but logically precedent, or generic, to both. Hence a neutral term should be chosen. The word 'fact' or 'the factual' seems truly neutral; and usage permits us to employ it with this meaning.

The problem of this paper is: Are there judgments of which 'the factual' forms the complete warrant; and, if so, how are these judgments related to the remainder of our knowledge? [2]

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[1] Read before the American Philosophical Association at the Cornell meeting, December 27, 1907.

[2] Some objections to the following argument may be forestalled by a brief statement of the premises upon which it rests. It is not intended in any way to take issue for or against the views of the nature of truth held by Mr. Joachim (*The Nature of Truth*, Oxford, 1906), by Professor Dewey (*Journal of Phil., Psych., and Sci. Methods*, 1907), or by Mr. Russell (*Proceedings of the Aristotelian Society*, N. S., Vol. VII); especially not, for my own conviction is that these antagonistic views can be reconciled, that each author is facing a different problem and of course offers a different solution. The type of knowledge with which this paper deals, is that of the special sciences and that of formal logic, the complete system of true propositions.

Man gains possession of parts of this system by inference; and I believe with Mr. Russell (*Principles of Mathematics*, p. 11) that all inference is deduction. The system is, from the human point of view, a conclusion following from premises. If we think of it in the abstract, quite apart from human inference (*sub specie æternitatis*), we may say with the logicians, 'any true proposition is implied by every proposition,' Many contemporary philosophers have held that all judgments are universal in the sense that they are subject to correction by other judgments. Still logic tells us that there are judgments which differ from one another in the degree to which they are thus subject to correction; for in the square of opposition *I* is always true when *A* is, and can be true when *A* is false, that is, *I* is more easily proved true, or is proved false with greater difficulty than is *A*. All of which indicates that the more particular our judgments are, the less are they subject to correction by other judgments. This difference we can make the basis of a division of all judgments into two conceivable classes, the universal and the absolutely, or completely, particular. By the former class, we mean all judgments that are subject to correction or proof through other judgments. By the latter class, we mean those judgments which are not subject either to proof or to disproof through other judgments. As a mere working definition, the second is quite legitimate, even though it should prove true that there are no members of the class defined. At least, it is legitimate unless we deliberately beg the question at issue by so defining judgment that our class becomes a mere contradiction in terms; and, even in this case, we should have to make room for our notion of an absolutely particular judgment by inventing for it some other name.

However, the absolutely particular judgment, if there be any such, must have its warrant. Where can this be found? *In the factual.* In short, if there are members of this class of judgments, we may define the factual more precisely than we have already done, as *that which completely warrants an absolutely particular judgment.* The factual would then be indeed an absolute starting-point for knowledge, and we should be able to define it as a purely logical notion, and therefore as free from all metaphysical presuppositions other than those of pure logic.

Are there such judgments? This question is part of the

in short, any proposition is a premise of any true proposition; but we are not dealing with it thus abstracted. For man it truly has premises, and these premises play a very important rôle.

I find that in the current number of *Mind* (January, 1908) Professor Stout has defended, from a somewhat different standpoint, the main thesis of this paper.

larger question: Are there judgments that are always premises, in other words, that are never conclusions from other judgments used as premises? Thus, if by 'primary judgment' we mean any judgment that is not an inference from some other judgment, or that has no other judgment as a premise, and if by 'secondary judgments' we mean those judgments which are conclusions from premises, the question may be worded: Are there primary judgments or are all judgments secondary? There are three conceivable types of primary judgments: First, axioms, or judgments that we assume and have no expectation of ever being able either to prove or to disprove; second, absolutely particular judgments, as just defined; and third, a class of judgments that are temporarily at least primary, a class of judgments that are mere assumptions for which we have as yet no proof, but for which we are theoretically able to get proof. In short, our third class is that of all complete logical leaps, or the class of pure inductive inferences.

Now we are forced to hold either that human knowledge is one enormous vicious circle or that there are primary judgments; and, as far as I know, all philosophers choose the latter alternative. Even those who insist most upon the interdependence of our judgments are loudest in asserting the axiomatic character of the principles of logic, *e. g.*, the principle of contradiction. Yet to admit the existence of one primary judgment as premise is really to give up the fight, for if there can be one, there is no *a priori* objection to there being more. Thus, to avoid concluding that knowledge is a vicious circle, we now have to admit that it depends upon premises which are primary; for we have admitted that there is really such a relation as that between an absolute premise and its conclusion, and therefore that all knowledge can be tested by the standard of this relation. In short, all knowledge can be regarded as a deduction from premises of some sort. Therefore, if the principles of logic are alone infallible primary judgments, we must conclude that, as far as knowledge is not a deduction from these premises, it is a deduction from mere assumptions. In any case, unless we are ready to assert of all our knowledge what the philosophical mathematicians of the Peano school assert of mathematics, our secondary judgments must have more than merely axioms as premises. Evidently all admit that they have.

Are these premises merely logical leaps? Such ought to be the doctrine of those who find in the principles of logic our sole ultimate test of truth. Our judgments are pure guesses except in as far as their consilience, taken together with their increasing number, raises their degree of probability.

Is this extreme doctrine tenable? That there are logical leaps in our knowledge is surely true, for the whole field of inductive inference seems populated with them; and it is true also that in their case the principles of logic are the sole power making for law and order. Still it is just this complete dependence upon the principles of logic that forms an overwhelming objection to the extreme doctrine. By what miracle has mere guess given us a body of knowledge with as much internal consilience as our sciences have? Surely we are arguing against a man of straw, for the views of no philosopher are consistent with any such doctrine. That what we see or hear has something to do with our judgments, is admitted by all; but all do not see the consequence of this admission. If what we see and hear has anything whatsoever to do with our judgments, logic knows of but one influence this factual can have. It must be other than psychological. It must be the influence a premise has upon a conclusion.

And yet, with most the difficulty of admitting the existence of absolutely particular judgments does not lie here. Bradley tells us that without ideas there can be no judgments, and ideas are universals. Moreover, we can raise the further objection: none of our judgments used in daily life and in science is thus particular. The moment we use words, we are employing a medium of expression that has to be universal to be intelligible. Again, all our judgments, even our perceptions, are logically complex; and it is of course a psychological impossibility under usual circumstances for us to apprehend any content without interpreting it in terms of past experience. That is, our actual judgments are not primary, but secondary to a high degree. This, however, is not a valid objection against the logical existence of absolutely particular judgments, even though it shows that psychologically they do not exist or at least do not exist frequently. True, we cannot isolate these judgments from their complex logical setting and above all we cannot express them verbally.[1]

Their logical presence as premises is none the less manifest. It is itself a logical fact of which our theory of judgment must take cognizance. In short, it is logically precedent to every theory of judgment, not the reverse. Therefore, if it conflicts with any one's definition of judgment, the fault lies with the definition.

If judgment be defined as 'an awareness of a relation between terms,' we certainly have judgments with full factual warrant; for we can discern within the factual some terms and some relations without in any logical sense going beyond it for information. Indeed, every chapter on the psychology of analysis and discrimination is but the story of how we gain those elements of our complex knowledge which come directly from immediate experience and from no other source, and which are at the same time fully warranted by the facts.

Still the objection will be raised: Does not the doctrine asserting the existence of such judgments deny the complete coherence of reality? Or, expressed in terms of logic, Does it not take these judgments out from under the rule of the principle of contradiction?

Precisely what is meant by the proposition, 'reality is coherent,' is not always made clear.[2] If we mean that no true propositions contradict one another, the doctrine does not call this in question. If we mean that all existential propositions imply one another, this again, if I mistake not, is not called in question, for I am convinced that no factual judgment is an existential judgment. If we mean, however, that any true proposition whatsoever is implied by every other proposition, this may be true for the complete system of abstract science, but it is not true in actual human knowledge. If it is, of course, there are no factual judgments.

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[1] Here, doubtless, the reader will ask for an example. As already stated, to put an example in words is to assert more than the factual judgment; for it brings in an 'appercipient character,' as Joachim calls it. Still our verbal judgments cannot but make clear what is meant. 'Red is different from green.' 'A is bigger than B.' 'I prefer this to that.' 'This pain is severe.' 'It seems colder to-day.' If I mistake not, these judgments are quite the same as those Meinong calls *a priori* and that form the class he names 'Soseinsurteile.' *Cf.* Meinong, *Über die Erfahrungsgrundlagen unseres Wissens*, 1ster Abschnitt.

[2] I expect that Mr. Joachim will reply to Professor Stout (*op. cit.*) that Professor Stout has misunderstood what he means by the coherence notion of truth. If Professor Taylor's account of it (*Metaphysics*, Book I, chap. ii) be acceptable to Mr. Joachim, I fail to see why he ought to oppose Professor Stout's thesis. A completely coherent knowledge or experience would unite in itself the factual judgment as well as the system of judgments we call abstract science by reaching a higher unity (*cf.* Bradley, *Appearance and Reality*, pp. 179–182). There appear to be three notions of

All of this can be beautifully illustrated by the history of mathematics. How different was the actual historical origin of the teachings of that science from the few ultimate premises upon which Peano and his school would to-day base them! That mathematics was of empirical origin is beyond question. That mathematics can be deduced from a few ultimate propositions of logic is to-day ably maintained. Are these two propositions contradictory? By no means. In short, the origin of any part of man's knowledge is one matter; the reformulation of that knowledge as an abstract symbolic system of truth is quite a different matter. In the one case, we are dealing with discovery and verification; in the other, with formulation.

Returning then to the objection under consideration, we may say: In the discovery of truth man uses factual judgments as premises and these premises are absolute starting-points, whereas

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knowledge that, when confused, give rise to mistaken controversy. First, there is the notion of knowledge as actually existing in the minds and lives of men. Second, there are the systems of abstract symbolic knowledge, such as mathematics and the natural sciences. Third, there is the notion of knowledge in its ideal form, knowledge with all its problems solved, with all its doctrines *self-evident*, with all its abstract and symbolic character done away, an immediate experience of the world total. In the first, we have the favorite field of the pragmatist; in the second, we have that of Mr: Russell and Mr. G. E. Moore; and in the third, we have that of Messrs. Bradley, Taylor, and Joachim. Why need any of these notions contradict the others? Of course they do contradict, if they are definitions of the *same term;* and of course recent controversy has thus interpreted them. But are they? It seems to me that a careful, open minded, friendly rereading of the several authors with this question in mind will lead to the answer, No. One thing at least is clear, each party feels itself misunderstood by the other. In the objection to factual judgments mentioned above, Professor Stout evidently feels that Mr. Bradley and Mr. Joachim are his opponents. I feel that perhaps Mr. Russell, Mr. G. E. Moore, and the symbolic logicians are the ones that may have to be won over.

in the ideal or complete system of abstract science, or formulated truth, the logician may regard all propositions as so completely interrelated materially that 'any false proposition implies every proposition and any true proposition is implied by every proposition.'

There will be the further objection: Do we not predict the factual, and is not the fulfillment of such predictions precisely what we mean by the verification of an inductive inference? Thus, in the famous case of the discovery of the planet Neptune, was not the vision of the star predicted? Yes and no, for the logical process meant is more complicated than the question implies. Factual judgments imply other propositions, and the implications of one factual judgment have to be consistent with the implications of another factual judgment. In short, to verify inductions does not mean to show that the propositions inferred in part from one or more factual judgments imply other factual judgments. This widespread error in popular logic is due to confusing two quite different things: first, the prediction that we shall see this or that under specified conditions, in short, an existential judgment; and second, the factual judgments which we shall be able to pass if we do see as predicted.

Thus the foregoing doctrine does not imply that, if two factual judgments contradict one another, they might still both be true. On the contrary, it implies that two factual judgments cannot contradict one another. Can they not do so indirectly, however, by the one implying the contradictory of what the other implies? No, because what would in that case be called in question is not the factual propositions but the inferences from them. For example, is not this precisely the logical treatment we give illusions, or images in a mirror? When inconsistency arises, we do not question what we saw but the inference from what we saw.

Finally, we may be asked: Do not factual judgments contradict one another in those cases of hesitancy and change of opinion where, for example, we are trying to decide which of two objects looks the larger, or seems the heavier, or which of two colors is the brighter or is nearer in hue to a third color? First, we should note in these cases that the factual content is changing from instant to instant. Hence, when we study these cases from the standpoint of logic, we find something quite complicated. Second, our decision after such moments is often determined by factors that make it not a factual judgment but a logical leap; for often we give our decision though we know that we lack warrant. Such cases seem, therefore, rather to show that the conditions under which we can get full factual warrant have a bounding zone where the mind is at a loss whether or not it has full warrant. This might well be a serious source of error, were it not that the mind is able to tell when it is unquestionably in the field where full warrant is to be got.

What picture, then, have we of knowledge in the actual making, looking at it through the spectacles of logic? Our premises are in part some factual judgment and in part various assumptions, or logical leaps in the form of mental imagery, feelings of tentative reaction or of any other kind, all of which leads to inferences, let these inferences be what they may psychologically, let them be habitual reactions or mental states of a highly cognitive character. Logically, part of our premises have their warrant immediately; the others and the inferences must, however, await their proof. Here the work of the principle of contradiction begins. It forms our protection against assuming premises that the data in hand contradict, let these data be, looked at psychologically, merely inhibitory reactions or again images or feelings roused by association. Likewise it protects us against false inferences by the presence of similar data. Put in terms of logic, the principle of contradiction protects us against assuming premises or making inductions that previously accepted propositions contradict. In the enormous mass of tentative knowledge which we have to accept as the basis of conduct, it is our protector; but fortunately some elements of our knowledge are infallible and do not have to go through this process of refinement. Psychologically speaking, this infallible knowledge grows as analysis and discrimination grow; and the percepts, the thoughts, feelings, and reactions that are aroused along with it by associative processes become more important and of wider range. Logically speaking, the factual that we apprehend keeps changing, and its elements, namely, its terms and relations, become more and more also terms of other and increasingly important premises. Thus the implications of both sets of premises constitute a larger, more consilient, more enduring, and more successful system of judgments.[1]

Our results and their important bearings and implications may be summed up as follows. There are scattered through human knowledge numerous, if not numberless, infallible propositions. We have called them judgments having full factual warrant. In the first place, pure mathematics contains many of these judgments, even though it be true that this science is entirely deductive, for the process of deduction itself involves factual judgments. Besides mathematics there are numerous judgments that also approach the pure factual judgment and that could perhaps be brought together in a science.[2] As in mathematics, so in their case, the noticeable characteristic of these judgments is that they do not assert of their terms *any existential* or any causal relation. In fact, this seems to be the great dividing line. The judgments that do assert these relations are secondary, and depend logically in part upon some inductive leap as premise.

Second, Mr. Bradley and Professor Dewey speak of the inner discrepancy of the factual, which causes us to go beyond the facts and find a larger system of reality into which to fit them. Literally the facts are not discrepant and cannot be, nor are facts contradictory. We should rather say, the presence, along with purely factual premises, of other premises, especially of those which we have called logical leaps, implies a larger system than the mere factual.

Third, our results, if correct, have an important bearing upon the theory of judgment. We have been dealing with judgment in its logically simplest form, a mere awareness of relationship between terms without either these terms or relations involving logical presuppositions. The familiar judgments that are usually taken as examples are in comparison highly complex, and therefore are analyzable into many judgments. Moreover, one of their main features is, as has been often pointed out, an element in them, perhaps best called 'assertion,' that constitutes them members of the larger system of truth. In short, if we define judgment as 'an awareness of a relation between terms,' these complex judgments involve not one relationship but many, and ought not, in their complex form, to be made the basis of our definition of the nature of judgment. Finally, if we have limited the scope of the principle of contradiction by withdrawing it as a criterion of the truth of the factual judgments, we have at the same time emphasized its power elsewhere, for we have implied that elsewhere consilience between judgments is the sole and complete test of truth.

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[1] This account contradicts in no way, if I mistake not, the admirable account of knowing given by Professor Dewey (*Journal of Phil., Psych., and Sci. Methods*, Vol. IV, p. 12). What I am here trying to state is the way in which the actual developing cognition looks, if your standpoint be that of deductive logic. Of course, if you deny the right thus to regard it, or if your own standpoint is another one, such an account seems preposterous.

[2] Meinong's *Gegenstandstheorie*.

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